

WHAT IS CLAIMED IS:

1. A method of fabricating an electrode device comprising steps of:
 - forming a glass film of material having glass components on a semiconductor, metal or insulating substrate to form crystallites having a grain diameter of 50 nm or smaller;
 - growing and dispersively forming nanotubes or nanowires by using the crystallites as nuclei of catalyst; and
 - forming a metal coat on surfaces of the nanotubes or nanowires.
2. A method according to claim 1, wherein a chemical component of the glass film is oxide which contains elements of group IVb or VIII of the periodic table.
3. A method according to claim 1, wherein the crystallites in the glass film are made of metal oxide and growth directions of crystallites have all a same orientation.
4. A method according to claim 1, wherein a diameter of each crystallite in the glass film is 50 nm or smaller.
5. A method according to claim 1, wherein a distribution of diameters of the crystallites in the glass film is approximately a Gauss distribution.
6. A method according to claim 1, wherein SiO_2 and/or TiO_2 are added to the glass components by a

proper amount.

7. A method according to claim 1, wherein a surface specific resistance of the nanotubes or nanowires coated with the metal coat is better than $10^{-3}\Omega\cdot\text{cm}$.

8. A method according to claim 1, wherein a distance between adjacent longest nanotubes or nanowires at tips thereof is 1 nm or wider.

9. A method according to claim 1, wherein the nanotubes or nanowires coated with the metal coat are made of material whose chemical composition has carbon of 80 atomic percents or larger as a main component.

10. A method according to claim 1, wherein the nanotubes or nanowires are made of material whose main chemical composition has compound of C, B and N as a main component.

11. A method according to claim 1, wherein the nanotubes or nanowires are made of material whose chemical composition has metal elements of group IVb or VIb of the periodic table.